(b) Governing propellers. Fifteen hundred complete cycles must be made across the range of pitch and rotational speed.

(c) Feathering propellers. Fifty cycles of feather and unfeather operation must be made.

(d) Reversible-pitch propellers. Two hundred complete cycles of control must be made from lowest normal pitch to maximum reverse pitch. During each cycle, the propeller must run for 30 seconds at the maximum power and rotational speed selected by the applicant for maximum reverse pitch.

(e) An analysis based on tests of propellers of similar design may be used in place of the tests of this section.

[Amdt. 35–8, 73 FR 63349, Oct. 24, 2008]

§ 35.41 Overspeed and overtorque.

(a) When the applicant seeks approval of a transient maximum propeller overspeed, the applicant must demonstrate that the propeller is capable of further operation without maintenance action at the maximum propeller overspeed condition. This may be accomplished by:

(1) Performance of 20 runs, each of 30 seconds duration, at the maximum propeller overspeed condition; or

(2) Analysis based on test or service experience.

(b) When the applicant seeks approval of a transient maximum propeller overtorque, the applicant must demonstrate that the propeller is capable of further operation without maintenance action at the maximum propeller overtorque condition. This may be accomplished by:

(1) Performance of 20 runs, each of 30 seconds duration, at the maximum propeller overtorque condition; or

(2) Analysis based on test or service experience.

[Amdt. 35–8, 73 FR 63349, Oct. 24, 2008]

§ 35.42 Components of the propeller control system.

The applicant must demonstrate by tests, analysis based on tests, or service experience on similar components, that each propeller blade pitch control system component, including governors, pitch change assemblies, pitch locks, mechanical stops, and feathering system components, can withstand cyclic operation that simulates the normal load and pitch change travel to which the component would be subjected during the initially declared overhaul period or during a minimum of 1,000 hours of typical operation in service.

[Amdt. 35–8, 73 FR 63349, Oct. 24, 2008]

§ 35.43 Propeller hydraulic components.

Applicants must show by test, validated analysis, or both, that propeller components that contain hydraulic pressure and whose structural failure or leakage from a structural failure could cause a hazardous propeller effect demonstrate structural integrity by:

(a) A proof pressure test to 1.5 times the maximum operating pressure for one minute without permanent deformation or leakage that would prevent performance of the intended function.

(b) A burst pressure test to 2.0 times the maximum operating pressure for one minute without failure. Leakage is permitted and seals may be excluded from the test.

[Amdt. 35–8, 73 FR 63349, Oct. 24, 2008]

§ 35.45 [Reserved]

§ 35.47 [Reserved]

APPENDIX A TO PART 35—INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

A35.1 GENERAL

(a) This appendix specifies requirements for the preparation of Instructions for Continued Airworthiness as required by § 35.4.

(b) The Instructions for Continued Airworthiness for each propeller must include the Instructions for Continued Airworthiness for all propeller parts. If Instructions for Continued Airworthiness are not supplied by the propeller part manufacturer for a propeller part, the Instructions for Continued Airworthiness for the propeller must include the information essential to the continued airworthiness of the propeller.

(c) The applicant must submit to the FAA a program to show how changes to the Instructions for Continued Airworthiness made by the applicant or by the manufacturers of propeller parts will be distributed.